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1: LNHUPS. pulmonary surfact...[gi:71967]

BLink, Domains, Links

LOCUS LNHUPS 248 aa linear PRI 16-JUL-1999
 DEFINITION pulmonary surfactant protein A precursor (genomic clone) - human.
 ACCESSION LNHUPS
 VERSION LNHUPS GI:71967
 DBSOURCE pir: locus LNHUPS;

summary: #length 248 #molecular-weight 26280 #checksum 3689

; genetic: #gene GDB:SFTPA1; SFTP1; SP-A; SP-A1 ##cross-references
 GDB:119593; OMIM:178630 #map_position 10q22-10q23 #introns 58/1;
 98/1; 124/1

; superfamily: mannose-binding lectin; C-type lectin homology

; PIR dates: 31-Dec-1990 #sequence_revision 31-Dec-1990 #text_change
 16-Jul-1999

KEYWORDS alveolar proteinosis; calcium; gaseous exchange; glycoprotein;
 hydroxylysine; hydroxyproline; lung; pulmonary surfactant;
 respiratory distress syndrome.

SOURCE Homo sapiens (human)

ORGANISM Homo sapiens

Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
 Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.

REFERENCE 1 (residues 1 to 248)

AUTHORS White,R.T., Damm,D., Miller,J., Spratt,K., Schilling,J.,
 Hawgood,S., Benson,B. and Cordell,B.

TITLE Isolation and characterization of the human pulmonary surfactant
 apoprotein gene

JOURNAL Nature 317 (6035), 361-363 (1985)

MEDLINE 86014366

PUBMED 2995821

REFERENCE 2 (residues 1 to 248)

AUTHORS Haagsman,H.P., White,R.T., Schilling,J., Lau,K., Benson,B.J.,
 Golden,J., Hawgood,S. and Clements,J.A.

TITLE Studies of the structure of lung surfactant protein SP-A

JOURNAL Am. J. Physiol. 257 (6 Pt 1), L421-L429 (1989)

MEDLINE 90119861

PUBMED 2610270

COMMENT Pulmonary surfactant is a complex of phospholipids and proteins
 that lowers the surface tension at the air-liquid interface in the
 alveoli of the lung.
 This protein is a sialoglycoprotein synthesized by alveolar type II
 cells. It also inhibits surfactant secretion and facilitates
 phospholipid uptake by type II cells. Its activities are dependent
 on the presence of calcium ions.

FEATURES Location/Qualifiers

source 1..248
/organism="Homo sapiens"
/db_xref="taxon:9606"

Protein 1..248
/product="pulmonary surfactant protein A precursor
(genomic clone)"
/note="alveolar proteinosis protein; pulmonary surfactant
32K apoprotein; pulmonary surfactant-associated protein
(PSP-A) "

Region 1..20
/region_name="domain"
/note="signal sequence"

Region 21..248
/region_name="product"
/note="pulmonary surfactant protein A"

Bond bond(26)
/bond_type="disulfide"
/note="interchain"

Region 28..100
/region_name="domain"
/note="collagenous"

Site 30
/site_type="modified"
/note="4-hydroxyproline (Pro) "

Site 33
/site_type="modified"
/note="4-hydroxyproline (Pro) "

Site 36
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Site 42
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/note="4-hydroxyproline (Pro) "

Site 51
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/note="5-hydroxylysine (Lys) "

Site 57
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/note="4-hydroxyproline (Pro) "

Site 63
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Site 76
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Site 82
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Site 88
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Site 97
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/note="4-hydroxyproline (Pro) "

Region 127..246
/region_name="domain"
/note="C-type lectin homology #label LCH"
Bond bond(155,246)
/bond_type="disulfide"
Site 207
/site_type="binding"
/note="carbohydrate (Asn) (covalent)"
Bond bond(224,238)
/bond_type="disulfide"

ORIGIN

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61 gppgempcpp gndglpgapg ipgecgckge pgergppglp ahldeelqat lhdfrhqilq
121 trgalslqgs imtvgekvfs sngqsitfda iqeacaragg riavprnpee neaiasfvkk
181 yntyayvglt egpspgdfry sdgtpvnytn wyrgepagrg keqcvemytd gqwndrnclly
241 srlticef
```

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